



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/336,245	06/18/99	HERR	D 1734

IM22/0807
NATIONAL STARCH AND CHEMICAL COMPANY
P O BOX 6500
BRIDGEWATER NJ 08807-0500

EXAMINER	
ZALUKAEVA, T	
ART UNIT	PAPER NUMBER

1713

DATE MAILED: 08/07/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/336,245

Applicant(s)

HERR ET AL.

Examiner

Tanya Zalukaeva

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 8-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7 and 37, drawn to a curable adhesive composition, classified in class 525, subclass 182+.
 - II. Claims 8-17,35-37, drawn to another curable adhesive composition, classified in class 525, subclass various.
 - III. Claims 18-24 and 37, drawn to another curable adhesive composition, classified in class 525, subclass various.
 - IV. Claims 25-34, drawn to yet another curable adhesive composition, classified in class 525, subclass various.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups I and II and III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of different adhesive curable compositions while having in common in groups I and II a maleimide component and in Groups III and IV a vinyl compound, possess entirely different units, represented by Q, X, Z, K.

3. The recited groups are different in terms of their functionalities, heteroatoms, polarities, and therefore engender different properties and different functions and modes of operations to the very adhesive compositions as claimed. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Groups II, III and IV, restriction for examination purposes as indicated is proper.

5. Claims 1, 8, 18 and 25 are generic to a plurality of disclosed patentably distinct species comprising species X and Q in claim 1; species K and Z in claim 8, species X and Q in claim 18; species K and Z in claim 25. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. During a telephone conversation with Jane E. Genaro, Esq., on July 22, 2000 a provisional election was made without traverse to prosecute the invention of Group I claims 1-7 and 37. The election was made as follows: in claims 1 and 5 m=0, and therefore X is not present. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Art Unit: 1713

9. Claims 4-7 recite the limitation "of Q as being a urethane group, as per claim 4; an ester group as per claim 5, a different ester group as per claim 6, and yet another ester group, as per claim 7 " in the above stated claims. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1713

Claims 1-7 and 37 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Klemarczyk (U.S. 4,806,608), Drain et al (U.S. 4,886,842), Rossi et al (U.S. 4,581,461), Gaku et al (4,370,467) each one individually.

Klemarczyk discloses curable siloxane maleimide compositions represented by a formula in lines 2-10 of col. 2, wherein R' is an alkenylene or alkylene group, the R'' groups are independently selected from hydrocarbons or halohydrocarbons, n is at least 1. The inventive compounds can be thermally cured alone or in admixture with other radically curable monomers. The maleimide compounds can be cured with or without added initiator. Radical initiators include peroxide and azonitrile initiators (col. 2, lines 50-60). compounds obtained by Klemarczyk where n is about 9 and higher can be used as additives for radically curable silicone compositions.

Drain discloses curable adhesive compositions comprising a compound with a plurality of epoxy groups, a compound having a polyoxyalkylene amine, one of maleimide compounds presented in the abstract, and a photocurable ethylenically unsaturated compound and photoinitiator (see abstract d col. 2, lines 41-65). The epoxy component can be a monomer, oligomer or a polymeric compound, wherein the diglycidyl ether of a bisphenol is preferred (col. 3, lines 40-53). The amine component is limited to polyoxyalkylene amines having two or more aliphatic amino groups, especially

Art Unit: 1713

preferred are low molecular weight compounds represented by formula on lines 30-32 of col. 4.

Rossi discloses maleinated siloxane derivatives, which are presented by formula (I) in lines 60-65, wherein R is independently selected from hydrogen, alkyl and phenyl, and R' is an imide presented by three compound in col. 2, lines 5-10, wherein one of compounds is a maleimide derivative. The composition of Rossi can be utilized as a radiation curable composition for forming a pressure sensitive adhesive.

Gaku discloses a curable resin composition from a polyfunctional aromatic ester and maleimide composition comprising (I) a catalytic composite comprising peroxide and (II) a mixture of a reaction product of (a) a polyfunctional cyanate ester or a precopolymer of a cyanate ester and an amine and a polyfunctional maleimide, prepolymer of maleimide, or precopolymer of maleimide and optionally (c) other compounds (see abstract). the composition cures rapidly and is excellent in respect to adhering properties, heat-, moisture- and chemical resistance. AS for polyfunctional cyanate esters Gaku presents them with the general formula in col. 1, lines 50-55, wherein R is an aromatic nucleus which contains a residue in which two benzene groups are bonded together with a group shown in line 65 of col. 1, wherein R^1 and R^2 , are represented by the formulas in col. 2, lines 5-15, which includes species as claimed for Q in the instant claims

Art Unit: 1713

Therefore, Rossi, Drain, Gaku and Klemarczyk disclose generic compositions, which under certain permutations will reasonably lead one skilled in the art to the claimed compositions. The references teaches small genus which places a claimed species in the possession of the public, *In re Schaumann*, 197 USPQ 5, and the species would be obvious even if the genus were not sufficiently small to justify a rejection under 35 U.S.C. 102.

And the generic teaching of curable compositions, having maleimide moieties and other functionalities as generically disclosed by Klemarczyk, Drain, Gaku and Rossi necessarily indicates, that any curable composition, having recurring monomer units exemplified in the cited references (identical to the moieties of Patentees), would have been operable within the scope of Patentees invention. Therefore it would have been obvious to a skilled artisan at the time the invention was made to arrive at the claimed subject matter, because it appears that the claimed subject matter is within the scope of generic teaching of each of references cited. And a person of an ordinary skill in the art would have expected all the embodiments of the cited reference to work as curable adhesive compositions motivated by an expectation of success.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanya Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 am - 5:30 PM.

Art Unit: 1713

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

T,2.

Tanya Zalukaeva
Examiner
Art Unit 1713

August 2, 2000



DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700